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Abstracts

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Detection of European bat lyssavirus type 2 in Danish Daubenton's bats

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European bat lyssavirus (EBLV) is considered to be endemic in the Danish bat populations, but limited information exists about the types of EBLV strains currently in circulation. EBLV type 1 (EBLV-1) is seen as the predominant type in the Serotine bats (Eptesicus serotinus) with the latest case identified in 2009. EBLV type 2 (EBLV-2) has not been reported in Denmark but a survey in 1986 revealed two EBLV positive Myotis bats; a Daubenton's bat (Myotis daubentonii) and a pond bat (Myotis dasycneme)(Grauballe et al. 1987). Typing of these EBLV isolates was not performed but as Myotis bats are known to be associated with EBLV-2 this result suggested that type 2 EBLV was also present within the country at that time. In the present study, mouth swabs (in total 136) from Danish bats, representing 10 different bat species, were collected during the autumn of 2013. They were screened for the presence of EBLV RNA using a new molecular diagnostic strategy based on pan-lyssavirus RT-qPCRs (Fischer et al. 2014). In two samples, obtained from Daubenton's bats, EBLV RNA was detected by the pan-lyssavirus RT-qPCR targeting the highly conserved L-gene. Subsequent analysis with EBLV specific RT-qPCRs showed the presence of EBLV-2 in the bats. Furthermore, nucleotide sequencing of the RT-PCR products obtained from the pan-lyssavirus assay, revealed a distinct sequence with 98% similarity to published EBLV-2 strains from neighbouring countries. Our results show that EBLV-2, in addition to EBLV-1, is circulating in the Danish bat populations.